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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,785	10/10/2006	Rob Otte	GB 040087	4522
24737 7590 05/21/2010 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
DOBSON, DANIEL G				
ART UNIT		PAPER NUMBER		
2613				
MAIL DATE		DELIVERY MODE		
05/21/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,785

Applicant(s)

OTTE, ROB

Examiner

DANIEL G. DOBSON

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 02/03/2010, with respect to Claim 1 have been fully considered and are persuasive. The rejection of Claim 1 in view of *Korevaar* and *Javitt* has been withdrawn.
2. Applicant's arguments filed 02/03/2010 (arguing that *Korevaar* does not include a diffuser) have been fully considered but they are not persuasive.

Applicant argues that surface (16) "does not generate diffuse light, it merely reflects light back towards the CCD camera." The examiner respectfully disagrees. *Korevaar* states that the surface (16) scatters the light back (Col. 4, l. 32 and l. 62.) Merriam-Webster (merriam-webster.com) defines scattering as (5a) "reflecting irregularly and diffusely" or (b) "causing (a beam of radiation) to diffuse or disperse." IEEE (The Authoritative Dictionary of IEEE Standard Terms, 7th Edition) defines scattering as "[t]he change in direction of light rays or photons after striking a small particle or particles. It may also be regarded as the diffusion of a light beam cause by the inhomogeneity of the transmitting medium." IEEE further defines diffuser as "[a] device to redirect or scatter the light from a source, primarily by the process of diffuse transmission." Thesaurus.com lists diffuse as a synonym for scatter. Furthermore Applicant's Specification states that reflecting radiation diffusely "means hat the incoming radiation is redirected or reflected in various directions from the diffuser . . . (§ 21.) Accordingly, the

examiner respectfully submits that "scatter" as used by *Korevaar* is the same process described and claimed by Applicant.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites the limitation "the at least one auxiliary detector". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,118,131 to *Korevaar*.

As to **Claim 11**, *Korevaar* discloses an optical network including a plurality of nodes, a first said node including a receiver (Fig. 3, receiver node) and a second said node including a transmitter for transmitting a radiation beam to be received by said receiver (not shown in Fig 3, but implied by the arrival of incoming beam (46) which had to originate at a transmitter,)

wherein the wherein the receiver further includes a diffuser (Fig. 3, surface (16) of detector (14)) encircling at least one primary optical detector (Fig. 2A, surface (16) encircles detector (18)) to form an assembly (Fig. 3, detector and diffuser assembly) that is arranged such that the diffuser lies substantially in or close to the field of focus of a focusing element (Fig. 3, detector (14) in focus of focusing element (52)) for generating diffuse light by diffusely redirecting radiation intended for the at least one primary optical detector towards the at least one auxiliary detector (Col. 4, ll. 62-7, light is scattered from surface (16) back to auxiliary detector (camera, Fig. 3, 32)) in the case where the radiation beam is not aligned with the at least one primary optical detector (Fig. 2B, shows where the radiation beam is not aligned with the detector.)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,118,131 to Korevaar and U.S. Patent Application Publication 2002/0131121 A1 to Jeganathan et al.

As to **Claim 12**, *Jeganathan* discloses first node including both a transmitter for transmitting a radiation beam and a receiver and said second node including a receiver, wherein the first node is arranged to align the radiation

beam output from the transmitter on the first node with respect to the receiver on the second node, based on a signal output from the receiver in said first node (Fig. 1, two nodes with narrow transmission beams for communication, and wide beams for aligning to one another.)

Jeganathan and *Korevaar* are from the same art with respect to optical communications, and are therefore analogous art.

At the time of the invention, it would have been obvious for a person of ordinary skill in the art to use apply the transceiver disclosed by *Korevaar* as two nodes with transmitters and receivers that align to one another. The suggestion/motivation would have been to provide a robust but inexpensive tracking system to maintain superior alignment between the transceivers (§ 4.)

As to **Claim 13**, *Jeganathan* discloses wherein the second node is arranged to transmit a relatively narrow divergence data beam and relatively wide divergence auxiliary beam, and wherein the receiver in the first node is arranged to align the primary detector with respect to the auxiliary radiation beam (Fig. 1, narrow divergence beam for data and wide divergence beam for alignment.) The suggestion/motivation is the same as that used in the rejection for claim 12.

As to **Claim 14**, *Jeganathan* discloses wherein the network is arranged such that aligning the primary detector with respect to the auxiliary radiation beam also aligns the primary detector with the data beam from the second node (Fig. 1, narrow divergence beam for data and wide divergence beam for

alignment.) The suggestion/motivation is the same as that used in the rejection for claim 12.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,118,131 to Korevaar and U.S. Patent Application Publication 2004/0208595 A1 to Mok et al.

As to **Claim 15**, *Korevaar* discloses a receiver (20) for optical communications including:

at least one primary optical detector (12) for receiving an incoming radiation beam (Fig. 3, detector (14) with active area (18) receives incoming beam (46)),

a redirecting surface (13) for redirecting an incoming radiation beam (Fig. 3, Fig. 2A and B, surface (16) redirects the beam (38) back to the CCD camera (32)) (16b),

at least one pair of auxiliary optical detectors (15a, 15b) arranged to receive redirected radiation from the surface (Fig. 3, CCD camera (32) has many pixels for imaging, any two pixels would be considered a pair of optical detectors, Col. 4, ll. 35-7, image of surface (16) is received by camera (32)) (13), and

wherein the surface (13) is a diffuser (Fig. 2A and B, 38, light not hitting the active area of the detector (18) is reflected to the CCD camera; Col. 4, ll. 35-6, an image of the surface is received at the CCD camera, meaning a diffuse reflection process has occurred) encircling the at least one primary optical detector to from an assembly (Fig. 3, detector and diffuser assembly, with

detector (18) and surface (16)) that is arranged such that the diffuser lies substantially in or close to the field of focus of a focusing element (Fig. 3, detector (14) in focus of focusing element (52)) for generating diffuse light by diffusively reflecting radiation intended for the at least one primary detector towards the at least one pair of auxiliary optical detectors (Col. 4, ll. 62-7, light is scattered from surface (16) back to auxiliary detector (camera, Fig. 3, 32)) in the case where the radiation beam is not aligned with the at least one primary detector (Fig. 2B, shows where the radiation beam is not aligned with the detector.) *Korevaar* discloses that the radiation received at the at least one pair of auxiliary optical detectors (light reflected to the CCD camera) is used to align the primary detector and the radiation beam (Col. 5, ll. 1-15.)

Korevaar uses human input to align the primary detector and the radiation beam imaged by the CCD camera (based on intensity), so a control system is not expressly disclosed.

Mok also discloses a CCD used to align incoming radiation with a detector (Fig. 7, camera (66) and CCD image.) The control system (67) is connected to the auxiliary detectors (66) and aligns the primary detector with the radiation beam (Fig. 7, CCD image, received spot is aligned in x and y directions to desired location.)

At the time of the invention, it would have been obvious for a person of ordinary skill in the art to use the control system disclosed by *Mok* in the system

disclosed by *Korevaar*. The suggestion/motivation would have been to automate a previously human controlled process.

Mok is from the same art with respect to optical communications, and is therefore analogous art.

Allowable Subject Matter

10. Claims 1-10 allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DANIEL G. DOBSON** whose telephone number is (571)272-9781. The examiner can normally be reached on 7-4 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL G DOBSON/
Examiner, Art Unit 2613
05/17/2010

/Kenneth N Vanderpuye/
Supervisory Patent Examiner, Art Unit 2613